

# **Grandview Pesticide Fire**

**January 26-28, 2005**

## **Lessons Learned**

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### **Background**

On January 26, 2005, at approximately 1230 hours, a fire of unknown origin began in a pesticide storage warehouse at the Wilbur-Ellis facility in Grandview, Washington. The resulting smoke plume from the fire was possibly contaminated by the burning pesticides and fertilizer, and therefore posed a risk to the nearby citizens and environment. As a result of this risk, an immediate evacuation of over 400 Grandview citizens was conducted within a half-mile radius of the facility. Interstate 82 was closed for extended periods of time, as were local schools. This situation continued to various degrees for the three-day duration of the incident.

Using the Incident Command System, over 30 separate response agencies coordinated their efforts to manage the incident. Ecology's Central Region Response Team worked through the entire incident providing assistance with command and control (ICS), technical assistance, environmental oversight, and safety information. Currently, the Central Region's Toxic Cleanup Program is continuing oversight of cleanup and disposal issues.

The following information highlights a number of lessons, successes, recommendations, and actions specific to this incident for consideration by Ecology Spills Prevention, Preparedness & Response Program (SPPR). The focus of this lessons learned review is on Ecology's involvement in this incident, and does not attempt to characterize all of the potential issues raised during this response action.

### **Lessons Learned**

#### ***Lesson: Early Activation of the Northwest Area Contingency Plan***

**Success:** Early recognition by Ecology Responders that this fire was developing into a major hazmat incident prompted an important and timely Ecology activation of the Northwest Area Contingency Plan (NWACP). This plan can be activated when all local and state resources are maximized, and further assistance on the federal level is warranted. The lack of readily available and highly technical air monitoring tools and technicians at the local and state levels prompted this call by Ecology. Activation of the plan is accomplished by notifying and informing the Environmental Protection Agency (EPA) of the scope of the incident, requesting specific federal assistance (in this case air monitoring), and by EPA agreeing to provide the requested assistance in accordance with the NWACP.

Because EPA and their Superfund Technical Assessment and Response team (START) contractor mobilization and response would require over four hours, early activation of the NWACP was critical. The plan's activation, approved by Unified Command (UC), went smoothly and was well coordinated. The resulting air monitoring data collected by EPA/START was a valuable decision making tool throughout the response.

**Recommendation:** During Ecology Safety and Competency Training (SAFETRAC), continue to emphasize the importance of learning and understanding the applications of local, state, and federal response plans. Encourage responders to use these resources whenever applicable. Continue to encourage "over responding" to incidents, including the use of multi-agency plan activations.

**Action:** Local, state, and federal response plans are adequately addressed in the SAFETRAC Program. SAFETRAC evaluators should ensure that responders thoroughly understand these plans, their application, and how they are activated. This specific incident should be reviewed in detail with each of the regional teams.

### ***Lesson: Development of Formal Unified Command Essential***

While an informal Incident Command System was developed and used to a degree during the initial phases of this incident, it was more than four hours before a more formal UC was established and used effectively. This can be attributed directly to the lack of training and practice in using ICS by the local responders and some outside agencies. A Fire Service Type III Team, an ICS trained team for wild-land fire response similar to Ecology's Incident Management Assist Team (IMAT) was activated, which responded from Benton County to work the incident later in the day on January 26.

**Success:** By applying the training and experience gained through Ecology's DRILLTRAC Program, Ecology's responders were eventually able to help organize the Grandview Command structure into a formal UC using Enhanced 201 tools. This included the development of the first Incident Action Plan (IAP). Once established, the UC and the arriving Type III Team successfully managed the incident through to the Project Phase of the incident. Ecology's first IAP served as the model for subsequent plans. This initial organizational effort by Ecology was greatly appreciated by the UC.

**Recommendation:** When ICS is used during spills, the majority of responses primarily use only enhanced ICS 201 tools. Therefore, an important part of DRILLTRAC should be a strong emphasis on initial incident planning and enhanced ICS 201 proficiency. The use of these initial response ICS tools provides not only an efficient organizational structure for the majority of our spills, but also the foundation for a smooth and efficient transition to a more comprehensive command structure should the need arise.

Regular training and practice with the enhanced ICS 201 tools should be encouraged for all full-time and after-hours responders. All responders should, when appropriate, use the enhanced ICS 201 tools during responses. Also, on a regional basis, enhanced ICS 201 training could be offered to local responders. The training is simple, straightforward, and effective. This consideration is being addressed in SPPR's 2005-07 Strategic Plan.

**Action:** As part of the DRILLTRAC Program and IMAT training, *Initial Incident Planning* will be emphasized. The successful development and implementation of early and effective command and control during the early stages of an incident, even before the formal establishment of a UC, will be the objective. This will be accomplished by the early development of a 201, and when applicable an enhanced 201, during spills, drills, and DRILLTRAC/SAFETRAC training.

***Lesson: Incident Command “Coach” an Important Tool***

Because of a lack of training and experience in ICS by the majority of the responders at the Grandview Pesticide Fire, Command and Control proved challenging during the first phases of the incident (note above). Once a formal UC was established, Command and Control effectiveness improved. A degree of peripheral coaching of the UC, provided by ICS experienced responders (Ecology and Fire), promoted this improvement. However, a more formal and direct coaching system during the incident would have alleviated a number of communications and ICS systems problems that developed. An ICS “coach” or “coaches” during such spill incidents would be very useful.

**Recommendation:** It is recommended that regardless of the incident size, type, or experience of the ICS participants, coaching should be considered as an important part of any ICS application when Ecology is involved. The Coach can work with the IMAT to assist them in accomplishing their objectives by helping to maintain clear communications and effective ICS application. Coaches work “the system,” not “the issues.”

**Recommendation:** As part of Ecology’s DRILLTRAC Program, a more formal designation of *Incident Command System Coach (ICSC)* should be considered, along with determining appropriate training and application.

*Note: In hindsight, an Ecology or other agency ICSC could have corrected a number of significant problems that occurred during the Grandview Incident. In the future, CRO will be requesting ICSC assistance along with any IMAT activation.*

**Action:** An IMAT ICSC position(s) will be incorporated into all Spills Program IMAT deployments and encouraged at other responses as appropriate. Decisions on who can fill ICSC positions, qualifications, and any associated training will be determined by our DRILLTRAC facilitators.

***Lesson: Close Coordination with Yakima Valley Emergency Operations Center (EOC)***

During emergencies, many vital tasks and responsibilities beyond the scope of the UC need to be addressed. At spill incidents, the UC is established at the Command Post (CP) to address spill operations and remediation. Many other issues related to the response are handled by the local or state level EOC. An example of this at the Grandview incident was demonstrated during the large and complex evacuation ordered by the UC. Once initial citizen evacuations were completed (a UC responsibility), the continuing care of over 400 people from the affected areas

around Wilbur-Ellis needed to be addressed. This and many other issues including political, jurisdictional, and other support were handled by the local EOC members and staff.

**Success:** The Yakima Valley Office of Emergency Management clearly understood their roles and responsibilities during the Grandview incident. Their early activation of the local EOC, and the subsequent work and coordination by their members and staff were of great value to the UC. This included working with the Red Cross (EOC members) to accommodate the displaced Grandview Citizens, which was a huge challenge in itself. Throughout the incident, the Yakima Valley Office of Emergency Management's EOC provided excellent support and government liaison assistance.

**Recommendation:** It is rare during Ecology responses that we deal with EOCs, as they are usually activated only during the largest of spills. Nevertheless, their importance and value should not be underestimated. Therefore, during SAFETRAC and DRILLTRAC training and review, understanding the relationship of the CP/EOC, their differences, duties, responsibilities, and value should be emphasized. IMAT Liaison Officers should be particularly well versed in the value and importance of the EOC, as the Liaison is the communications bridge between the CP and EOC.

**Action:** Emphasize the CP/EOC relationship during SAFETRAC and DRILLTRAC training. More importantly, develop a specific training tool for the Liaison position of the IMAT that addresses in detail the CP/EOC connection.

### ***Lesson: Coordination with Ecology's Air Program***

By the nature of the Grandview pesticide warehouse fire, the public health impacts of combustion emissions were a major consideration and concern. Smoke from the fire was possibly contaminated, and the smoke plume extension from the Wilbur-Ellis site prompted the half-mile evacuation. While Yakima County has a designated Air Authority to address such air issues, at the time of this incident they lacked deployable expertise and requested that Ecology provide technical assistance. Ecology's Air Quality Program contacted SPPR and offered to provide technical assistance. The SPPR responded in the affirmative, and provided an on-scene contact person for the Air Quality Program to work with. That contact person was the Federal On-Scene Coordinator (FOSC).

The Air Quality Program assisted with toxicological, meteorological, and modeling resources from the Headquarters Office, and an air quality specialist assisted from the Yakima Office. The FOSC initially requested assistance with modeling (the models they had available could not run a zero wind scenario), and help in determining what was in the warehouse (they had a general list at the scene, but needed specific compounds and amounts). The Air Quality Program representatives worked with the Department of Health and Department of Agriculture to provide the requested assistance.

At a later point in the incident, the FOSC requested the Air Quality Program's assistance with monitoring protocols and monitor siting to support a re-entry decision. At some point, while working on this aspect, the FOSC asked SPPR to halt all communications with Ecology's Air Quality Program, stating that the communications and input had become critical and

unproductive. At that point, Ecology redirected all Air Quality Program communication to go through their SPPR representative, and communication between the Air Quality Program and the FOSC was halted. It should be noted that while the author of this document directed the Air Quality Program to deploy staff to work with the FOSC, and subsequently told the Air Program to cease communications with the FOSC, he did not personally observe or participate in any of the communications described above. This author's observations were that the majority of communications from the CRO Air Program to Ecology SPPR staff at the CP were courteous and professional.

Involvement of Ecology Programs other than SPPR during emergencies needs to be evaluated to determine the most effective way to route technical expertise in order to maximize the value of the input. If it is determined that Ecology Programs outside of SPPR are going to offer their assistance during the emergency response phase of an incident, a number of points must be considered:

- What authority does the Program have to participate in emergency responses?
- What expertise does the Program have to offer during the emergency phase of a response?
- How should that expertise be folded into the structure of ongoing decision making during the emergency response?
- Do the Program personnel assigned to the response have the emergency response training and communication skills necessary to productively contribute during an emergency incident?

**Recommendation:** If it is determined that Ecology Programs other than SPPR will assist SPPR during emergency responses, then specific training relative to working in emergency situations and ICS should be provided to identified program personnel. This training could consist of a brief explanation of ICS, communications, an understanding of chain of command, and a general explanation of interaction protocols at both command posts and at spill sites. This training could be handled on a case-by-case need in the regions.

The Toxics Cleanup Program and Hazardous Waste Program have experience working emergency incidents with close, effective communication in the on-scene command structure. The training and preparation provided in advance to these Programs can serve as a model for preparing the Air Program for integration during emergency responses.

**Action:** SPPR and Air Quality Program Managers from HQ and CRO met to discuss the incident at Grandview. They agreed to develop a statewide list of available expertise in air quality, and provide it to the State On-Scene Coordinators and spill responders for future incidents involving public health concerns related to air quality. This will allow the command structure to call for expertise when it is warranted.

The managers agreed to provide tabletop style training for selected Air Program personnel who may be called upon to assist with future incidents. Risk communication (from the government to the public) was a concern of the Air Program Managers, and it was generally agreed that it would be beneficial to include local health and local air agencies in a tabletop or mini-drill as well, in order to develop risk communication protocols for public health messaging.

It was further agreed that a meeting between the EPA START Team and selected Air Program personnel would be useful to facilitate better understanding of the START Team's air monitoring capabilities, and evaluate if and how technical expertise from the Air Quality Program could be best used in future incidents. If other Ecology Program involvement is warranted during an emergency and the other program staff have not been trained, then input should be routed through an SPPR liaison.

### ***Lesson: Early Coordination with Ecology's Toxic Cleanup Program (TCP)***

From the beginning of the Grandview incident it was clear that a major portion of Ecology's involvement would be overseeing the eventual cleanup of the Wilbur-Ellis site. This cleanup, projected to be a long-term operation, would occur within the Project Phase of the incident and require TCP's oversight. The site cleanup coordination began early on during the incident among SPPR, TCP, and Wilbur-Ellis. TCP determined that the cleanup could be conducted as an Independent Cleanup Action.

**Success:** Responding to the incident on the second day and working with SPPR and through the UC (Operations), a TCP representative contacted both Wilbur-Ellis and their contractor (NRC) to begin planning the cleanup operation. Because of the early involvement of TCP during this incident, the "hand-off" to TCP went very smoothly. Cleanup has since been completed, only awaiting final outcome of onsite soil sampling.

**Recommendation:** Spill Responders should be encouraged to look ahead during spill incidents and determine which, if any, Ecology Programs may have some degree of involvement in later phases of a spill. Responders should be encouraged to make early contact with these Programs to ensure a smooth transition of identified duties and responsibilities.

**Action:** Continue to emphasize the importance of early cross-program involvement during spills, when appropriate. This can be accomplished during DRILLTRAC training and post-incident lessons learned debriefs.

### ***Lesson: CSEPP Program Planning was Applicable to this Incident***

Mass evacuations during spill incidents are rare and challenging. Conducting an evacuation, and then coordinating a safe and appropriate recovery and reentry can be equally challenging. The Grandview incident presented both of these challenges.

A great deal of time and effort has been invested by Ecology Response personnel in assisting in the development of a multi-agency Recovery and Reentry Plan (RRP) for the Umatilla Weapons Depot, Chemical Stockpile Emergency Preparedness Program (CSEPP). The plan outlines methods of sampling, testing, and evaluation of data collected from potentially contaminated areas should a spill occur. This data will be used for health, environmental, and agricultural considerations before recovery and reentry into potentially contaminated areas are allowed. While it might seem that the CSEPP-RRP would be program-specific to Umatilla, RRP application to other incidents has always been recognized as a possibly useful tool. This proved to be the case with the Grandview Pesticide Fire.

**Success:** The RRP developed for CSEPP was successfully applied to the Grandview Pesticide Fire. Development of the Grandview RRP was accomplished through the work of Ecology; local health and city officials; the State Departments of Health, Agriculture, and Emergency Management; and EPA. Many of these agencies were involved in the development of the initial CSEPP-RRP, so it was a relatively simple task and process to apply the RRP to the Grandview incident. The plan not only worked, but it worked well.

**Recommendation:** The CSEPP RRP is relatively simple, easily applied to various scenarios, and can be used in conjunction with smaller or larger evacuations. However, few agencies or municipalities are prepared to deal with evacuations, let alone the corresponding recovery and reentry challenges that evacuations pose.

Ecology Spill Responders should be familiar with the CSEPP RRP and able to offer basic guidance for its use to other agencies and municipalities when evacuations occur. While Ecology would not be the only agency responsible for developing and applying the plan, helping to initiate it and incorporate it during future incidents could be helpful, as it was in Grandview.

**Action:** Provide CSEPP RRP familiarization training to responders during regularly scheduled training events. In preparation, a RRP program could be presented to representatives from each of the regions, who could then provide the training to their teams. The training should require no more than one hour.

## **Conclusion**

The Grandview Wilbur Ellis fire was one of the largest, most involved hazmat incidents that has occurred in Yakima County and in Central Washington. It proved to be very difficult and challenging. However, a safe evacuation of over 400 citizens occurred without serious injury, and local, state, and federal resources effectively combined to mitigate this challenging incident to a commendable end.

No complex emergency response of this nature can be conducted without improvement. And to this end, many of the agencies involved have conducted combined and individual post-incident evaluations of this incident to identify and institute improvements for the future. This Lessons Learned document is offered as Ecology's contribution to this evaluation and learning process.